

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-18. (canceled)

19. (original) An apparatus of producing a protein crystal, comprising: a dialysis cell having a container for containing a protein crystal and a protein solution filled around the protein crystal, and provided with a dialysis membrane; means for controlling a concentration of the protein in the protein solution around the protein crystal; means for measuring a concentration of the protein solution around the protein crystal; a two-beam interferometer for observing interference fringes around the protein crystal; means for controlling a concentration of the precipitating agent in the protein solution around the protein crystal; and means for measuring the concentration of the precipitating agent in the dialysis cell.

20. (original) The apparatus according to claim 19, wherein the dialysis cell comprises: a quartz thin plate for mounting the protein crystal, and provided a light reflecting thin film on a portion of the front side surface or back side surface thereof; an inner vessel for containing the quartz thin plate therein, provided with a surface portion covered with a

dialysis membrane and filled with the protein solution therein; and an outer vessel filled with the protein precipitating agent solution outside the dialysis membrane.

21. (previously presented) The apparatus according to claim 19, wherein the means for measuring the concentration of the protein solution is a spectrophotometer.

22. (original) The apparatus according to claim 21, wherein the spectrophotometer measures an intensity of transmitted light that transmits a portion of the quartz thin plate in the dialysis cell where light reflecting thin film is not provided.

23. (previously presented) The apparatus according to claim 19, further comprising means for sending the precipitating agent solution having a desired concentration to the outer vessel of the dialysis cell.

24. (previously presented) The apparatus according to claim 19, further comprising means for introducing the protein solution having a desired concentration into the inner vessel of the dialysis cell without disassembling the dialysis cell.

25. (previously presented) The apparatus according to claim 19, further comprising means for photographing the interference fringes by the two-beam interferometer, such as a CCD camera.

26. (previously presented) The apparatus according to claim 19, wherein the two-beam interferometer is a Michelson type two-beam interferometer.

27. (canceled)